AMSAT News Service Weekly Bulletins
Issue: ANS-154
Date: 2018-06-03
Sources: amsat-ans-2018-ans-154-weekly-hyperkitty-2af25e011b.txt

---

AMSAT NEWS SERVICE
ANS-154

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

In this edition:

* Help Requested to Monitor for Signals From Chinese Lunar Sats
* Updates to AMSAT-NA TLE Distribution
* Digital Communications Conference (DCC) Call for Papers
* Invitation to the 2018 NASA AAQ Workshop - September 7, 2018
* China Microsatellite Symposium 2018
* ARLP022 Propagation de K7RA
* ARRL VUCC Satellite Awards and Endorsements
* Upcoming Binaryspace HAB Launch
* Satellite Shorts

SB SAT @ AMSAT $ANS-154.01
ANS-154 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 154.01
  From AMSAT HQ KENSINGTON, MD.
DATE JUNE 03, 2018
To All RADIO AMATEURS
BID: $ANS-154.01

Help Requested to Monitor for Signals From Chinese Lunar Sats

After their launch on 2018-05-20 at 21:28 UTC, LJ 1 and LJ 2 were maneuvered onto a track to the Moon. Several amateurs received telemetry from the satellites. But now LJ 1 appears to encounter problems.

Quoting Wei BG2BHC:
"Can you help to find amateurs in the US to help to monitor DSLWP-A
on
435.425
and 436.425 now? We lost the contact of satellite A on S band after
an
orbit
adjustment. We just tried to switch on UHF, but we don't know if it
works or
not.

If operating, 435.425 MHz should be 500bps GMSK and JT4 alternately.
436.425 MHz should be 250 bps GMSK. Both transmit once in 5 minutes.

LONGJIANG 1 - NORAD CAT ID 43471
LONGJIANG 2 - NORAD CAT ID 43472

[Nico, PA0DLO, for the above information]

Updates to AMSAT-NA TLE Distribution

The Japan Aerospace Exploration Agency (JAXA) has announced that three cubesat carrying Amateur Radio payloads were deployed from the ISS on May 11
at around 1030 UTC. See AMSAT News Service bulletin ANS-133 for details.

The following cubesats have been added to this week's AMSAT-NA TLE distribution and are designated by Space-Track as follows:

1KUNS-PF (Kenya)- NORAD CAT ID 43466 (a 3U cubesat with a 1200 bps or 9600
bps telemetry beacon at 437.300 MHz)

UBAKUSAT (Turkey)- NORAD CAT ID 43467 (a 3U cubesat with a CW beacon at
437.225 MHz, a telemetry beacon at 435.325 MHZ, and a linear transponder
with a 435.200 - 435.250 MHz downlink / 145.940 - 145.990 MHz uplink)

Irazu (Costa Rica) - NORAD CAT ID 43468 (a 1U cubesat with a 9600 bps telemetry beacon at 436.500 MHz)

Nico Janssen (PA0DLO) reminds us that it is still too early to tell if the
above CAT ID's are correct for each object. There may be changes.

[ANS thanks Ray, WA5QGD, for the above information]

Digital Communications Conference (DCC) Call for Papers

Technical papers are solicited for presentation at the ARRL and TAPR Digital Communications Conference (DCC) and publication in the Conference Proceedings. Annual conference proceedings are published by the ARRL. Presentation at the conference is not required for publication. Submission of papers are due by July 31st, 2018 and should
be submitted to

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111
or via the Internet to
maty at arrl.org

The ARRL and TAPR DCC is an international forum for radio amateurs to meet, publish their work, and present new ideas and techniques. This year, the DCC is in Albuquerque, New Mexico, September 14-16. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories,

experimental results, and practical applications. Topics include, but are not limited to:

- Software Defined Radio (SDR)
- Digital voice (D-Star, P25, WinDRM, FDMDV, DRMDV, G4GUO)
- Digital satellite communications
- Global position system
- Precise Timing
- Automatic Packet Reporting System (APRS)
- Short messaging (a mode of APRS)
- Digital Signal Processing (DSP)
- HF digital modes
- Internet interoperability with Amateur Radio networks
- Spread spectrum
- IEEE 802.11 and other Part 15 license-exempt systems adaptable for A mateur Radio
- Using TCP/IP networking over Amateur Radio
- Mesh and peer to peer wireless networking
- Emergency and Homeland Defense backup digital communications in Amateur Radio
- Updates on AX.25 and other wireless networking protocols
- Topics that advanced the Amateur Radio art

Go to https://tinyurl.com/y7wgm6vh to view the guidelines for paper submissions

[ANS thanks the TAPR PSR for the above information]

Invitation to the 2018 NASA AAQ Workshop - September 7, 2018

You are invited to participate in the 2018 NASA Academy of Aerospace Quality {AAQ) Workshop. This event will take place at Glenn Research Center in Cleveland, Ohio on Friday, September 7 from 8:00 AM to 4:30 PM. The event targets academics (faculty, researchers, students) involved with space related activities such as cube sat, small sat, high altitude balloon, rocket and more. It is also designed for those wishing to be involved with NASA space related projects. The event will feature speakers and a poster session.

Travel stipends from NASA are available to attendees on a limited basis and will favor those giving a presentation or poster. There is no registration charge for attending the event but registration in advance is required.

Please register at the link below by July 31.

http://spider2.eng.auburn.edu/AAQ/registration.html

The NASA Academy of Aerospace Quality is an open access virtual academy of

educational modules, lessons learned, standards, case studies and more related to quality assurance for space related projects, especially those from academic based teams. The website is:

http://aaq.auburn.edu

Links to the agenda and materials from previous NASA AAQ Workshops can be found at the link below:

http://aaq.eng.auburn.edu/events

[ANS thanks Alice Smith and Jeff Smith for the above information]

China Microsatellite Symposium 2018

The China Microsatellite Symposium(CMS2018), (www.microsatsymp.com) will be held at Northwestern Polytechnical University, Xi'an China on 18th - 20th November 2018. The symposium includes keynote presentations and several sessions which will focus on the design experience, scientific missions, launch opportunities and all new technologies about microsatellites. In addition, another import session, International CubeSat and Mission Contest will be held on 20th November 2018, after which a free launch opportunity of 3U CubeSat or 1U payload capacity will be awarded to the winner of the first prize. Participants can get information and submit the works through the official website of our contest: www.cubesatcontest.org.

The submission deadlines for the abstract of CMS2018 and work of CubeSat contest are both August 31, 2018. You could submit abstract and get information on the website www.microsatsymp.com

Along with the symposium, there will also be a related exhibition, during which you can find the updated progress of CubeSat, launchers and other related technology. For exhibitors, you could also get information about booth on the website.

The event is supported by China National Space Administration, International Astronautical Federation, Chinese Society of Astronautics and Chinese

Institute
of Command and Control.

If you have any questions, please contact service at microsatsymp.com.

[ANS thanks Ray Nugent for the above information]

ARLP022 Propagation de K7RA

ZCZC AP22
QST de W1AW
Propagation Forecast Bulletin 22 ARLP022
>From Tad Cook, K7RA
Seattle, WA June 1, 2018
To all radio amateurs

SB PROP ARL ARLP022
ARLP022 Propagation de K7RA

On May 30 at 0005 UTC the Australian Space Forecast Centre issued a warning: "On 1 June geomagnetic activity is expected to increase to Active and Minor Storm levels due to arrival of the co-rotating interaction region and high-speed solar wind streams associated with the recurrent trans-equatorial coronal hole."

On May 31 http://www.spaceweather.com issued this Solar Wind Alert: "NOAA forecasters estimate a 60% chance of minor G1-class geomagnetic storms on June 1st, increasing to 65% on June 2nd, when a stream of high-speed solar wind is expected to reach Earth. The last time this gaseous stream lashed our planet's magnetic field, almost a month ago, it sparked bright ribbons of purple light (a.k.a. 'STEVE') seen from multiple US states. Visit today's edition of http://www.spaceweather.com for more information."

The Sun remained active over the past reporting week. Average daily solar flux rose from 70.1 to 74.9, and average daily sunspot number rose from 7.7 to 26.3. During the previous week in which the average daily sunspot number was 7.7, the first four days had no sunspots.

New sunspot regions appeared on May 21, 23 and 24.

Predicted solar flux is 77 on June 1-3, 76, 74 and 72 on June 4-6, 70 on June 7-8, 71 on June 9, 72 on June 10-14, 70 on June 15-17, 72 on June 18-23, 73 on June 24, 72 on June 25-30, 70 on July 1-6, 72 on July 7-11, 70 on July 12-14 and 72 on July 15.

Predicted planetary A index is 25 on June 1-2, 15, 12 and 8 on June 3-5, 5 on June 6-12, 8 on June 13, 5 on June 14-18, 8 on June 19, 5 on June 20-23, 8 on June 24-25, 5 on June 26-27, then 15, 28, 15, 12, 10 and 8 on June 28 through July 3, then 5 on July 4-9, 8 on July 10, and 5 on July 11-15.

2018 ARRL Field Day is June 23-24. Assuming the predicted numbers above, conditions should be good for Field Day. We want to see low geomagnetic activity, and planetary A index at 5 and 8 on Saturday and Sunday are good indicators. During this period of low solar activity solar flux at 72 and 73 is also good.

Ted Leaf, K6HI of Kona, Hawaii reports that he is still in operation through the local volcanic activity, and asks, "Are there beacons for the lower frequencies, especially now with the lower solar

flux?"

I found this Wikipedia resource for HF beacons:

https://en.wikipedia.org/wiki/Amateur_radio_propagation_beacon

Of course, there are lower frequency HF resources on http://www.wsprnet.org, but this is a bit different than showing what you can tune in and hear without using a special weak signal mode.

Any readers have suggestions for lower frequency HF beacons?

Note that Ted has a comment on page 56 of the June 2018 QST regarding preamps and attenuator effects on receiver noise.

>From last week: https://bit.ly/2LG8MAp

F.K. Janda, OK1HH brings us this geomagnetic activity forecast for the period June 1-26, 2018.

"Geomagnetic field will be:
Quiet on June 11-12, 16-17, 20-23
Quiet to unsettled on June 10, 18, 24-25
Quiet to active on June 8-9
Unsettled to active on June 3-4, 7, 13-15, 19
Active to disturbed on June 1-2, (5-7, 26)

"Solar wind will intensify on June 1-3, (4-8, 13-15), 16-17, (18-19, 22-24)

"Remark:
- Parenthesis means lower probability of activity enhancement.
- Forecasts remain less reliable."

>From Dr. Tamitha Skov, the Space Weather Woman:

"What's Old is New Again

"Dear Tad,

"I am still smiling at the huge response I got to a post I put up on Twitter this week. A newbie to our Space Weather community dared to talk about amateur radio as if it were an outdated hobby-- whoops, bad idea. I gently educated him. In doing so, I roused many radio amateurs and emergency communicators, who added their own comments and talked about their own personal experiences in the field. It was very gratifying. What I hadn't expected, however, was the strong interest in the concept that amateur radio will be critical to establishing over-the-horizon radio communications on planets like Mars in the near future.

"This idea brings me back to how we managed to communicate over long distances many decades before we had satellites, internet or cellular networks. In terms of wireless communications on Earth, we were very much in the same place back in the early 1900s that we find ourselves in now when we think about colonizing Mars. Yet few people realize that despite all our advanced technology, we can't bring a cell phone to Mars. We will need to fall back on our 'old ways' of doing things when it comes to communicating on other planets. Isn't it funny how 'old' things become 'new' again?

"Speaking of, this week brings us a new chance for a decent solar storm. Strangely though, the source of this storm is an old coronal

hole that gave us a moderate level solar storm about a month ago.
This old hole has survived its backside passage on the Sun and has
now returned, with the new promise of bringing aurora views down to
mid-latitudes again. Isn't it funny, what was old has become new
again, in more ways than one!

"Cheers, Tamitha"

Dr. Skov's latest video report:

https://www.youtube.com/watch?v=QwvKyY26lB0

If you would like to make a comment or have a tip for our readers,
email the author at, k7ra(a)arrl.net .

For more information concerning radio propagation, see the ARRL
Technical Information Service web page at,
http://arrl.org/propagation-of-rf-signals. For an explanation of
numbers used in this bulletin, see
http://arrl.org/the-sun-the-earth-the-ionosphere.

An archive of past propagation bulletins is at
http://arrl.org/w1aw-bulletins-archive-propagation. More good
information and tutorials on propagation are at http://k9la.us/.

Monthly propagation charts between four USA regions and twelve
overseas locations are at http://arrl.org/propagation.

Instructions for starting or ending email distribution of ARRL
bulletins are at http://arrl.org/bulletins.

Sunspot numbers for May 24 through 30, 2018 were 39, 32, 26, 27, 20,
22, and 18, with a mean of 26.3. 10.7 cm flux was 73.7, 75.7, 72.9,
74.6, 76.9, 74.9, and 75.3, with a mean of 74.9. Estimated planetary
A indices were 4, 3, 4, 4, 4, 4, and 4, with a mean of 3.9.
Estimated mid-latitude A indices were 5, 4, 5, 5, 4, 5, and 5, with
a mean of 4.7.

[ANS thanks ARRL for the above information]

ARRL VUCC Satellite Awards and Endorsements

Here are the endorsements and new VUCC Satellite
Awards issued by the ARRL for the period May 1, 2018
through Jun 1, 2018.
Congratulations to all those who made the list this month!

CALL	01 May 2018	01 Jun 2018
KO4MA	1598	1627
KD8CAO	1240	1253
N8HM	1025	1054
N8RO	1040	1051
K4FEG	877	901
K6FW	703	743
N9IP	589	609
N6UK	551	568
K5ND	502	526
WD9EWK	430	441
KE4AL	317	379
NS3L	300	325

VE7CEW	292	304
AA9LC	New	299
AA8CH	218	256
G0ABI	124	200
N3GS	130	198
AA4FL	164	181
KE8FZT	100	175
XE1SEW	New	130
WU2M	New	105
KB2YSI	New	101
PU8MRS	New	100

If you find errors or omissions. please contact me off-list
at <mycall>@<mycall>.com and I'll revise the announcement.

[ANS thanks Ron, W5RKN for the above information]

Upcoming Binaryspace HAB Launch

Binaryspace is doing another High-Altitude
Balloon Launch from about 07:00 CAT on 9 June from the Leeukop Farm Airfield in Deneysville in the Free State. Everybody is invited to join us for the day to launch and chase the balloon. We are estimating a 3-hour mission from launch to recovery. The Sasolburg Amateur Radio Club (ZS4SRK) will join us with the tracking and recovery of the payload. Flexible Use of Airspace has been approved and depending on weather or technical difficulties, the launch and/or the payload contents can change at any time.

We have some new equipment to test on Mission - Binary 03. A SSTV Camera Transmitter (400 - 500 mW) will take a photo and transmit it every 5 minutes. The call sign is ZR6MUG and will transmit on 144.500 FM, Martin 1 Mode and you will need MMSSTV to decode. A Telemetry Transmitter (400 - 500 mW) will transmit telemetry data every 30 seconds under the call sign ZR6TG on 144.600 FM and you can use FLdigi to decode. And an APRS Transmitter (300 mW) will transmit position and altitude every minute on 144.800 MHz under the call ZR6TG-11. We will also have a Go-pro camera and a Science Lab (Raspberry pi based with lots of sensors) in the payload. The payload is estimated to be around 900 g and we are using a 1 000 g white balloon.

There are several prizes and awards available. The first person to recover the payload will get a prize and footage of the payload coming down will receive a prize. Special awards will be given to everyone who captures the SSTV images and RTTY telemetry. Please e-mail the decoded information, time of transmission (bonus if you can provide a recorded sound clip), your location and the equipment used totvdbon(a)gmail.com.

[ANS thanks SARL weekly news in English 2018-6-2 for the above information]

Satellite Shorts

(Venice, LA, USA) Wyatt Dirks, AC0RA, and Clayton Coleman, W5PFG's plan
    to activate maidenhead gridsquare EL58hx was
    rescheduled due to unsafe weather conditions. The new dates for

the
    expedition are June 7-9, 2018.

Please send your Hamvention photos that you would like to share with
others
   in our amateur radio community to journal(a)amsat.org.
   (thanks to Joe, KB6IGK for the request)

/EX

In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-
tional benefits. Application forms are available from the AMSAT
Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the stu-
dent rate for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,
Chris Bradley, AA0CB
aa0cb at amsat dot org